

Amendments to the Claims:

1. (currently amended) A method of milling an orthotic device by using a computer controlled milling tool, the orthotic device defined by a orthotic device upper contour, the orthotic device having opposing anterior and posterior portions thereof, the method comprising the steps of:

- a) providing a workpiece defining a mill plane and a perpendicular axis thereto;
- b) milling the milling tool into the workpiece along the perpendicular axis to a depth corresponding to the orthotic device upper contour; and
- c) translating the milling tool relative to the workpiece in the mill plane along a milling path while adjusting the depth of the milling tool to correspond to the orthotic device upper contour to selectively remove material from the workpiece for producing the orthotic device therefrom, the milling path being characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis, given ones of a portion of the mill rotations each having an elliptical section adjacent the posterior portion.

2. (original) The method of Claim 1 wherein step c) the milling tool is translated in the mill plane at a substantially constant speed.

3. (original) The method of Claim 1 wherein step c) the milling tool is sized and configured to perform a climb cut into the workpiece.

4. (original) The method of Claim 1 wherein the milling tool has a spherical-shaped end mill and wherein step c) the milling tool is translated along the milling path which aligns the spherical-shaped end mill tangentially with the orthotic device upper contour.

5. (original) The method of Claim 1 wherein the mill rotations each include at least one elliptical section thereof.

6. (original) The method of Claim 5 wherein the mill rotations are generally elliptical-shaped.

7. (canceled)

8. (currently amended) The method of Claim 17 wherein the given ones of the portion of the mill rotations each have a first arced section and a second arced section disposed adjacent the anterior portion.

9. (original) The method of Claim 1 wherein the orthotic device has opposing anterior and posterior portions thereof, the anterior portion has a primary width and the posterior portion has a secondary width, the primary width is greater than the secondary width.

10. (original) The method of Claim 9 wherein given ones of a portion of the mill rotations each have an elliptical section disposed adjacent the posterior portion.

11. (original) The method of Claim 10 wherein the given ones of the portion of the mill rotations each have a first arced section and a second arced section disposed adjacent the anterior portion.

12. (currently amended) A method of generating data for controlling a computer controlled milling tool to mill a workpiece to form an orthotic device therefrom having an orthotic device upper contour, the orthotic device having opposing anterior and posterior portions thereof, the method comprising the steps of:

a) accessing contour data representative of the orthotic device upper contour, the contour data being relatable to a mill plane and a perpendicular axis thereto; and

b) generating milling path data using the accessed contour data, the milling path data being representative of a milling path characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis, given ones of a

portion of the mill rotations each having an elliptical section adjacent the posterior portion.

13. (original) The method of Claim 12 wherein the milling path data is calculated to translate the milling tool in the mill plane at a substantially constant speed.

14. (original) The method of Claim 12 wherein the milling path data is calculated to configure the milling tool to perform a climb cut into the workpiece.

15. (original) The method of Claim 12 wherein the milling tool has a spherical-shaped end mill and wherein step b) the milling path is calculated to align the spherical-shaped end mill tangentially with the orthotic device upper contour.

16. (original) The method of Claim 12 wherein the mill rotations each include at least one elliptical section thereof.

17. (original) The method of Claim 16 wherein the mill rotations are generally elliptical-shaped.

18. (canceled)

19. (currently amended) The method of Claim ~~12~~¹⁸ wherein the given ones of the portion of the mill rotations each have a first arced section and a second arced section disposed adjacent the anterior portion.

20. (original) The method of Claim 12 wherein the orthotic device has opposing anterior and posterior portions thereof, the anterior portion has a primary width and the posterior portion has a secondary width, the primary width is greater than the secondary width.

21. (original) The method of Claim 20 wherein given ones of a portion of the mill rotations each have an elliptical section disposed adjacent the posterior portion.

22. (original) The method of Claim 21 wherein the given ones of the portion of the mill rotations each have a first arced section and a second arced section disposed adjacent the anterior portion.

23. (currently amended) A method of milling an orthotic device by using a computer controlled milling tool, the milling tool ~~having~~has a spherical-shaped end mill, the orthotic device defined by a orthotic device upper contour, the orthotic device having opposing anterior and posterior portions thereof, the method comprising the steps of:

- a) providing a workpiece defining a mill plane and a perpendicular axis thereto;
- b) milling the milling tool into the workpiece along the perpendicular axis to a depth corresponding to the orthotic device upper contour; and
- c) translating the milling tool relative to the workpiece in the mill plane along a milling path while adjusting the depth of the milling tool to correspond to the orthotic device upper contour to selectively remove material from the workpiece for producing the orthotic device therefrom, the milling path being configured to align the spherical-shaped end mill tangentially with the orthotic device upper contour, given ones of a portion of the mill rotations each having an elliptical section adjacent the posterior portion.

24. (original) The method of Claim 23 wherein the milling path being characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis.

25. (original) The method of Claim 23 wherein step c) the milling tool is translated in the mill plane at a substantially constant speed.

26. (currently amended) A method of generating data for controlling a computer controlled milling tool to mill a workpiece to form an orthotic device therefrom having an orthotic device upper contour, the orthotic device has opposing anterior and posterior portions thereof, the milling tool ~~having~~has a spherical-shaped end mill, the method comprising the steps of:

a) accessing contour data representative of the orthotic device upper contour, the contour data being relatable to a mill plane and a perpendicular axis thereto; and

b) generating milling path data using the accessed contour data, the milling path data being representative of a milling path, the milling path being configured to align the spherical-shaped end mill tangentially with the orthotic device upper contour, given ones of a portion of the mill rotations each having an elliptical section adjacent the posterior portion.

27. (original) The method of Claim 26 wherein the milling path being characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis.

28. (original) The method of Claim 26 wherein step b) the milling tool is translated in the mill plane at a substantially constant speed.

29. (new) A method of milling an orthotic device by using a computer controlled milling tool, the orthotic device defined by a orthotic device upper contour, the method comprising the steps of:

a) providing a workpiece defining a mill plane and a perpendicular axis thereto;

b) milling the milling tool into the workpiece along the perpendicular axis to a depth corresponding to the orthotic device upper contour; and

c) translating the milling tool relative to the workpiece in the mill plane along a milling path while adjusting the depth of the milling tool to correspond to the orthotic device upper contour to selectively remove material from the workpiece for producing the orthotic device therefrom, the milling path being characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis, wherein the orthotic device having opposing anterior and posterior portions thereof, the anterior portion having a primary width and the posterior portion

having a secondary width, the primary width being greater than the secondary width.

30. (new) A method of generating data for controlling a computer controlled milling tool to mill a workpiece to form an orthotic device therefrom having an orthotic device upper contour, the method comprising the steps of:

a) accessing contour data representative of the orthotic device upper contour, the contour data being relatable to a mill plane and a perpendicular axis thereto; and

b) generating milling path data using the accessed contour data, the milling path data being representative of a milling path characterized by a plurality of mill rotations about the perpendicular axis, successive ones of the mill rotations being radially further from the perpendicular axis, wherein the orthotic device having opposing anterior and posterior portions thereof, the anterior portion having a primary width and the posterior portion having a secondary width, the primary width being greater than the secondary width.

31. (new) A method of milling an orthotic device by using a computer controlled milling tool, the milling tool has a spherical-shaped end mill, the orthotic device defined by a orthotic device upper contour, the method comprising the steps of:

a) providing a workpiece defining a mill plane and a perpendicular axis thereto;

b) milling the milling tool into the workpiece along the perpendicular axis to a depth corresponding to the orthotic device upper contour; and

c) translating the milling tool relative to the workpiece in the mill plane along a milling path while adjusting the depth of the milling tool to correspond to the orthotic device upper contour to selectively remove material from the workpiece for producing the orthotic device therefrom, the milling path being configured to align the spherical-shaped end mill tangentially with the orthotic device upper contour, wherein the orthotic device having opposing anterior and posterior portions thereof, the anterior portion having a primary

width and the posterior portion having a secondary width, the primary width being greater than the secondary width.

32. (new) A method of generating data for controlling a computer controlled milling tool to mill a workpiece to form an orthotic device therefrom having an orthotic device upper contour, the milling tool has a spherical-shaped end mill, the method comprising the steps of:

a) accessing contour data representative of the orthotic device upper contour, the contour data being relatable to a mill plane and a perpendicular axis thereto; and

b) generating milling path data using the accessed contour data, the milling path data being representative of a milling path, the milling path being configured to align the spherical-shaped end mill tangentially with the orthotic device upper contour, wherein the orthotic device having opposing anterior and posterior portions thereof, the anterior portion having a primary width and the posterior portion having a secondary width, the primary width being greater than the secondary width.